UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,626	10/22/2001	Ridha M. Hamza	1100.1150101	1419

128 7590 02/09/2005

HONEYWELL INTERNATIONAL INC.
101 COLUMBIA ROAD
P O BOX 2245
MORRISTOWN, NJ 07962-2245

EXAMINER	
BHAT, ADITYA S	

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AMC

Office Action Summary	Application No.	Applicant(s)	
	10/014,626	HAMZA, RIDHA M.	
	Examiner	Art Unit	
	Aditya S Bhat	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 November 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28,30 and 32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,9-12,14,16-28,30 and 32* is/are rejected.

7)☒ Claim(s) *3-8,13 and 15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 9-12, 14, 16-18, and 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Hibino et al. (USPN 5,510,990)

With regards to claim 1, Hibino et al. (USPN 5,510,990) teaches a plurality of sensors (8a-c & 9; figure 13) each providing a location of the object with an associated sensor uncertainty distribution; (Col.11, lines 46-60) and

a data processor (5) for combining the location data from selected sensors and the distributions to generate a value indicative of the most likely position of the object. (Col. 7, lines 35-65), (figure 7)

With regards to claim 2, Hibino et al. (USPN 5,510,990) teaches the associated sensor uncertainty distribution is dependent on one or more performance characteristics for the sensor. (Col. 11, lines 26-45)

With regards to claim 9, Hibino et al. (USPN 5,510,990) teaches the location data from each sensor and the associated sensor uncertainty distribution are used to determine a probability distribution for a position of the object. (Col. 7, lines 35-65), (figure 7)

With regards to claim 10, Hibino et al. (USPN 5,510,990) teaches each probability distribution for the position of the object includes a value indicating a likely position of the object. (figure 7)

With regards to claim 11, Hibino et al. (USPN 5,510,990) teaches each probability distribution for the position of the object is segmented into a plurality of sub-ranges. (Figure 7)

With regards to claim 12, Hibino et al. (USPN 5,510,990) teaches each sub-range has an associated probability value indicative of the likely position of the object within the sub-range. (Figure 7)

With regards to claim 14, Hibino et al. (USPN 5,510,990) teaches the probability distributions for the position of the object have common sub-ranges. (Figure 7)

With regards to claim 16, Hibino et al. (USPN 5,510,990) teaches each sensor indicates a likely position of the object; (Col. 7, lines 35-65) ,(figure 7)

each sensor yields an associated probability distribution for the position of the object; (Col. 11, lines 52-61) and

each probability distribution for the position of the object is separated into a plurality of sub-ranges, said sub-ranges being applied to each probability distribution for the position of the object. (Col. 7, lines 35-65) ,(figure 7)

With regards to claim 17, Hibino et al. (USPN 5,510,990) teaches each sub-range, the probability values associated with each sensor are manipulated using statistical means (Col.7, lines 23-25) to generate a value indicative of the most likely

position of the object and an associated probability distribution for the most likely position of the object. (Figure 7)

With regards to claim 18, Hibino et al. (USPN 5,510,990) teaches that the system is adapted for optimizing the distance between objects. (Col. 8, lines 32-64)

With regards to claim 24, Hibino et al. (USPN 5,510,990) teaches a method for determining a most likely position of an object, said method comprising:

receiving location data and an uncertainty distributions for the object from each of a plurality of sensors; (8a-c & 9; figure 13) (Col.11, lines 46-60)

combining the location data and the uncertainty distributions to generate a value indicative of the most likely position of the object, (Col. 7, lines 35-65) ,(figure 7)and

combining the location data and the uncertainty distributions to generate a probability distribution for the most likely position of the object. (Col. 2, lines 35-55)

With regards to claim 25, Hibino et al. (USPN 5,510,990) teaches a

a plurality of sensors, (8a-c;figure 13) each sensor indicating a likely position of the object and each sensor yielding an associated probability distribution for the position of the object; (Col. 2, lines 35-55)

segmenting each probability distribution for the position of the object into a plurality of sub-ranges, said sub-ranges being identically applied to each probability distribution for the position of the object; (figure 7) and

each sub-range having a probability value and an associated probability distribution for the position of the object.(figure 7)

With regards to claim 26, Hibino et al. (USPN 5,510,990) teaches using statistical means to manipulate the associated probability values for each sub-range and generating a value indicative of the most likely position of the object.(Col. 8, lines 31-64)

With regards to claim 27, Hibino et al. (USPN 5,510,990) teaches using statistical means to manipulate the associated probability values for each sub-range and generating a probability distribution for the most likely position of the object.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 19-23, 28, 30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hibino et al. (USPN 5,510,990).

With regards to claim 19, Hibino et al. (USPN 5,510,990) teaches adapted for tracking the relative location of a plurality of objects: (Col.11, lines 52-62)

With regards to claim 20, Hibino et al. (USPN 5,510,990) teaches the plurality of sensors includes a plurality of radar systems. (Col.2, lines 11-13)

With regards to claim 21, Hibino et al. (USPN 5,510,990) teaches the plurality of sensors includes a plurality of beacon systems. (Col.2, lines 11-13) [beacon system is being interpreted as a type of radar system]

With regards to claim 22, Hibino et al. (USPN 5,510,990) teaches a system to determine a global position of an object, said system comprising a plurality of local

systems with each local system providing a value indicative of the most likely position of the object wherein each of the local systems includes:

a plurality of sensors (8a-c & 9; figure 13) each providing a location of the object with an associated sensor uncertainty distribution; (Col.11, lines 46-60) and

a data processor (5;figure1) for combining the location data from selected sensors and the distributions to generate a value indicative of the most likely position of the object. (Col. 7, lines 35-65) ,(figure 7)

With regards to claim 23, Hibino et al. (USPN 5,510,990 teaches each local system provides a probability distribution for the most likely position of the object. (Col. 7, lines 35-65) ,(figure 7)

With regards to claim 28, Hibino et al. (USPN 5,510,990) teaches method to determine a most likely global position of an object, said method comprising the steps of

receiving from a plurality of local systems a data on the most likely position of the object; (Col.11, lines 46-60) and combining the data from the plurality of local systems to generate a value indicative of the most likely global position of the object, (Col. 7, lines 35-65) ,(figure 7)

wherein at least selected local systems include two or more sensors (8a-c & 9; figure 13) wherein each sensor provides location data and a probability distribution for the object, the at least selected local systems combine the location data and the probability distribution from at least two of the two or more sensors to provide combined local location data and a combined local probability distribution for the object, the combining step combining the combined local location data and the combined local

probability distributions from at least selected local systems to generate a value indicative of the most likely global position of the object. , (Col. 7, lines 35-65) ,(figure 7)

With regards to claim 30, Hibino et al. (USPN 5,510,990) teaches at least two of the local systems are physically spaced from one another. (figure 5 system Vehicles)

With regards to claim 32, Hibino et al. (USPN 5,510,990) teaches a method for determining a most likely global position of an object, said method comprising:

providing two or more local systems, wherein each local system includes at least one sensor that provides location data and a probability distribution for the object; (8a-c & 9; figure 13) and

combining the location data and the probability distribution from at least selected local systems to generate a value indicative of the most likely global position of the object. (Col. 7, lines 35-65), (figure 7)

Hibino et al. (USPN 5,510,990) discloses the claimed invention except for the local systems. A local system is interpreted to mean a plurality of systems as claimed in the first claim. It would have been obvious to one having ordinary skill in the art at the time the invention was made to a plurality of systems as claimed in the first claim to form a local system, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter:

Claims 3-8, 13, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 22 November 2004 have been fully considered but they are not persuasive.

During patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

While the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

In this instance the applicant argues the combining feature in the claimed invention is not taught by the prior art of record. Applicant goes on to argue that the Hibino et al reference teaches using the data from one of the three sensors but does not

teach a processor that combines the location data and associated uncertainty distributions to generate a value indicative of the most likely position of the object. Applicant also argues that the present invention uses a plurality of local systems and that using a plurality of local systems does not merely involve duplication of working parts since the prior art of record does not involve the combining feature.

With regards to the combining feature, the claimed reference reads on the Hibino et al reference. The combining feature as it is claimed in the application does not clearly define this step/feature. Examiner reads the Hibino et al reference as having three input sensors and one output to generate a value indicative of the most likely (highest probability) position of the object. Examiner agrees that the Hibino et al reference does clearly select from one of the plurality of sensors. However the claimed invention is not descriptive enough to differentiate itself from this reference. If applicant were to more clearly define the combining feature the application may overcome the current rejection. With regards to the argument that the plurality of local systems does not merely involve duplication of working parts since the prior art of record does not involve the combining feature, since the prior art of record reads on the clamed invention the cited case law (plurality of local systems does not merely involve duplication of working parts since the prior art of record does not involve the combining feature) would apply.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gorr et al. (USPN 5,961,571) teaches a method and apparatus for automatically tracking the location of vehicles.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aditya S Bhat whose telephone number is 703-308-0332. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841 for regular communications and 703-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Aditya Bhat
February 3, 2005

John Barlow
Supervisory Patent Examiner
Technology Center 2800